

Title (en)

PHOTOCATALYST SHEET, METHOD OF BONDING THEREOF AND PROCESS FOR PRODUCING THE SAME

Title (de)

PHOTOKATALYSATORFLÄCHENGEBILDE, VERBINDUNGSVERFAHREN DAFÜR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FEUILLE DE PHOTOCATALYSEUR, SON PROCEDE DE D'ASSEMBLAGE ET SON PROCEDE DE PRODUCTION

Publication

**EP 1712280 A1 20061018 (EN)**

Application

**EP 04807212 A 20041210**

Priority

- JP 2004018854 W 20041210
- JP 2003429627 A 20031225

Abstract (en)

The present invention provides the photocatalyst sheet and the methods of welding and manufacturing the same, by which the substrate and resin of the photocatalyst-containing layer are not decomposed by photocatalyst particles, mutual welding of sheets is easy, and the photo-redox effect of a photocatalyst can be obtained. A photocatalyst sheet (1b) comprises a substrate (2) such as fiber and coated layers (3) on both sides of the substrate (2), and the coated layer (3) constitutes the photocatalyst-containing layer in which apatite-coated photocatalyst particles (4) are dispersed and fixed with resin. Here, the coated photocatalyst particles (4) on the surface of the photocatalyst-containing layer are so fixed as to have the parts exposed from the surface of the photocatalyst-containing layer. In case that photocatalyst sheets (1b) are mutually welded, the photocatalyst-containing layer of each photocatalyst sheet (1b) is not removed, and its surface is mutually held, and welded together by thermal welding or others.

IPC 8 full level

**B01J 35/02** (2006.01); **B01D 53/86** (2006.01); **B01J 21/06** (2006.01); **B01J 35/00** (2006.01); **B01J 37/00** (2006.01); **B01J 37/02** (2006.01); **B32B 9/00** (2006.01); **B32B 27/12** (2006.01); **B32B 27/18** (2006.01)

CPC (source: EP KR US)

**B01J 35/00** (2013.01 - KR); **B01J 35/39** (2024.01 - EP US); **B01J 37/0219** (2013.01 - EP US); **B32B 9/00** (2013.01 - KR); **B32B 27/12** (2013.01 - EP US); **B32B 27/18** (2013.01 - EP US); **B32B 37/04** (2013.01 - KR); **B01J 21/063** (2013.01 - EP US); **Y10T 428/19** (2015.01 - EP US); **Y10T 428/2438** (2015.01 - EP US); **Y10T 428/249924** (2015.04 - EP US); **Y10T 428/2991** (2015.01 - EP US); **Y10T 428/3154** (2015.04 - EP US); **Y10T 428/31826** (2015.04 - EP US); **Y10T 428/3183** (2015.04 - EP US)

Cited by

CN102917791A; EP2163304A3

Designated contracting state (EPC)

DE FR GB IE

DOCDB simple family (publication)

**EP 1712280 A1 20061018**; **EP 1712280 A4 20131106**; AU 2004308787 A1 20050714; AU 2004308787 B2 20100715; CN 1901994 A 20070124; CN 1901994 B 20121010; JP 5152737 B2 20130227; JP WO2005063392 A1 20071220; KR 100758332 B1 20070913; KR 20060107819 A 20061016; SA 04250434 B1 20081019; TW 200530028 A 20050916; TW I261026 B 20060901; US 2007148424 A1 20070628; US 7910513 B2 20110322; WO 2005063392 A1 20050714

DOCDB simple family (application)

**EP 04807212 A 20041210**; AU 2004308787 A 20041210; CN 200480038995 A 20041210; JP 2004018854 W 20041210; JP 2005516566 A 20041210; KR 20067012670 A 20060623; SA 04250434 A 20041225; TW 93138687 A 20041214; US 58377904 A 20041210